Joint professional guidance on the use of general anaesthesia in young children

Frequently Asked Questions

1. **What should I say to the parents/ carers of a young infant who express concern about anaesthesia and the potential for long-term effects on the brain?**
   This should prompt an open discussion using the advice to parents/ carers and also the advice to professionals from the APA website. It may be helpful to have these to hand and give them a chance to read these documents before further discussion.
   The central points to explain are:
   a) That the surgery or procedure is only being scheduled because it is necessary
   b) The experimental data and measures used in animals cannot be directly translated into serious long-term effects in human infants
   c) That there are currently no data to indicate that a single anaesthetic of short duration causes long-term changes in cognitive development
   d) The importance of careful management of paediatric anaesthesia by trained personnel within a safe environment need to be emphasised
   e) That all babies and children are closely monitored during anaesthesia and surgery to maximise safety and minimise side-effects
   f) That surgery cannot be safely performed without adequate anaesthesia and analgesia.

2. **If parents still remain unsure or are concerned about providing consent for anaesthesia and surgery, what should you do?**
   In the rare case when parents or carers remain sufficiently concerned to withhold consent for elective procedures, it may be necessary to organise a further discussion with all the relevant disciplines, to discuss the benefits of the procedure/surgery and risks of delay. This may result in postponement for cases that are not urgent. Emergency or urgent surgery may still need to take place, and risks associated with delay clearly outweigh the theoretical issues about anaesthesia on long-term cognitive development.

3. **If I am called to anaesthetise a young infant should I instigate a discussion about long-term effects of anaesthesia on cognitive development?**
   It is important to discuss all the known risks of anaesthesia in the pre-surgical discussion. Based on the current data, we do not believe that discussion of effects of anaesthesia on cognitive development is mandatory.

4. **Should I alter my current anaesthesia practice in response to the current evidence base information or other published statements?**
   No. There is currently no evidence to support one particular anaesthetic technique or drug regimen that has benefit over another in terms of reducing the potential effects of anaesthesia on the infant brain. In addition, changing anaesthesia practice from a familiar to an unfamiliar technique can itself introduce risk.

5. **Is repeated exposure or long duration exposure to anaesthetic agents more harmful than short-duration single exposure?**
   There is not enough evidence to answer this question at this time. Evidence from both epidemiological and prospective studies indicates that a single exposure to anaesthesia of an hour appears to be safe in terms of cognitive development. The epidemiological studies carried out so far have not shown major adverse effects on the infant brain that can be specifically related to anaesthesia. Infants who need multiple anaesthetics or those who require complex surgery and anaesthesia of long duration usually have additional comorbidities that can affect development. This has made data analysis on multiple exposures or longer-term exposures unable to definitively resolve the issue.

ENDS